

# EXHIBIT 13



# Lightning & Taro: Towards a Multi-Asset Crypto Payment Network



Explainers > Networks

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In this AMA session, we take a deeper dive into what Lightning Labs aims to achieve in the future to bring more use cases and liquidity to the Lightning Network and drive the adoption of Bitcoin.

On June 30th, 2022, AAX Trends hosted an AMA session on its Discord channel so that users could stay up to date with the new developments of Bitcoin, the Lightning Network, and TARO protocol. For that occasion, Leo Weese, the Technical Content Lead at Lightning Labs, gave some insights regarding Lightning Network.

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## Questions from the Discord Community

work on other blockchains with a utxo model and Taproot. The main benefit of issuing such assets on Bitcoin would be that you can also deposit these assets into payment channels and transact over the general Lightning Network, which is why I expect Taro to be most popular for assets that are commonly used for payments, such as stablecoins.

**Q:** What are some of the opportunities with TARO and how is this protocol different from other alternative first and second-layer chains like say Solana, Polygon, or Ethereum?

**A:** When we talk about assets on blockchains, we often think about “smart contracts.” Bitcoin’s smart contracts are different from Ethereum (I’ll use Ethereum as an example for smart contract platforms like Solana, BSC, etc.) in that they are generally enforced on the blockchain, but not executed. Taro goes a step further, and only uses the Bitcoin blockchain to address the double-spend problem, e.g. to order transactions, decide which of two competing transactions comes first. In Taro, smart contracts and asset transfers are not executed by the blockchain, and they are also not enforced by the blockchain. Instead, transfers are executed by the sender of an asset (who has to make a corresponding bitcoin transaction), and enforced by the recipient (who has to verify all the signatures to make sure they are being given a real asset).

**Q:** What are the possible implications for Bitcoin? Over the long term, how does this project feed into bitcoin adoption?

**A:** If successful, it will increase demand for Bitcoin transactions, which pay fees that secure the network in the long run. I believe the main advantage will be that it strengthens the network effects of the Lightning Network. Currently, there are a lot of people who would want to benefit from instant and cheap transactions, but who don’t want to or can’t afford to hold Bitcoin. Taro would allow them to keep a stablecoin balance in their Lightning wallet, while also being able to receive Lightning payments from anywhere around the world, and make outgoing payments to anyone.

**Q:** Is there a way for people to invest in TARO? Will there be a token? Or is there another strategy to benefit from TARO’s growth?

**A:** There will not be a Taro token, so be aware of anyone trying to sell you one! But there will be assets ON Taro, hopefully some stablecoins, but maybe also assets similar to ‘wrapped’ assets, or tokenized gold. It is also possible to create unique assets (like NFTs), but whether there is a strong appetite for other things on Bitcoin’s network, I don’t know. If you’re familiar with how services currently try to benefit from their presence in the Lightning Network, then you may also imagine how services want to benefit from Taro. People will run explorers (called Universes in Taro), or they will offer to swap Taro assets to BTC and back, or they will provide liquidity services.

**Q:** The current problem with crypto payments is that it takes a long time for validation and processing. Can you talk more about the potential of Lightning Network and Taro in our everyday lives?

**A:** Being able to transact instantly without waiting for confirmations is really cool, it makes paying for things with Bitcoin a much better experience, and because transactions don’t have to be published on the blockchain, they



to understand. Lightning payments do carry a fee too, often calculated as a percentage of the total amount, meaning that for large transactions, Lightning payments can currently be uneconomical. The Lightning Network has different properties though. While in a blockchain, fees generally go up with increased usage, in the Lightning Network they are expected to go down, as more users can use the same channels, which subsequently helps to generate more income.

## Live Questions

***The AMA session was followed by a live Q&A period in which users could ask Leo Weese questions about the crypto exchange, the industry at large, and more.***

**Q:** Almost 80% of investors are focused purely on the price of a token in the short term instead of understanding the real value and health of a project. Could you tell us what the motivations and benefits are for investors to hold their token in the long term?(From @Thakur8909)

**A:** Luckily there is no Taro token! There are investors in Lightning Labs, and they share our vision of building a global payment network. But Taro can be used by anyone and you won't need to go through Lightning Labs to use our implementation, or build your own, or issue your own assets.

**Q:** What are the next steps in the evolution of Lightning Labs? Will there be a structured roadmap made available to the community looking to get involved with the project? (from @ovam8270)

**A:** There are quarterly roadmap presentations, reach out if you want to join them. We explain our vision for the Lightning Network, our Lightning node implementation LND, and our services, such as Loop or Pool.

**Q:** Adoption is a milestone for every blockchain project, especially at this sensitive period in time where many blockchain projects have died out in the bear market, as not enough people use their team's blockchain. What are your team's strategies and visions on this problem to onboard more users for the Lightning platform?

**A:** Lightning adoption is indeed a challenge, especially for merchants and those willing to pay with it. At the moment we see a big influx of people wanting to run Lightning nodes, which help route payments through the network, in exchange for a fee. Beyond that, there are various ways of getting involved. We are hosting our LND reviews club today (<https://lnd.reviews/>), where we go through a pull request together. There are also ways to build on top of LND, have a vision, find a business plan, implement a prototype, and present it to the community. Lightning Labs is very supportive of these ideas and projects, we help with questions, connections, and we join and co-organize hackathons.

**Q:** If I am a talented developer with knowledge of Solidity, SQL, and other programming languages, how would you support me if I were to be your developer? Are there available grant programs on Lightning platform? Any upcoming developers' workshop I should know of? How do developers & technical people contribute and how does Lightning Labs plan to involve them?( from@capcosmos)



**A:** The recent milestone was a Taro asset issuance on the testnet. There's an implementation in the works, I can't promise when it will be ready for mainnet as there are a lot of complicated moving parts and we're dealing with real money here, but it's probably sooner than we think!

**Q:** How is TARO going to change the game? What can they promise to their consumers to gain their trust?

**A:** Trust will grow over time. It's an open protocol and the implementation will be open source. People will trust it more and more as bugs are fixed, assets are deployed, and successfully transacted.

**Q:** What measures are put in place to ensure the security of transactions carried out on the Taro network? Where can we read more details or find more information on the Taro network like their website? (X\_topher)

**A:** Taro isn't necessarily its own network, it's a protocol built on Bitcoin that interfaces with the Lightning Network. You can find some documentation here: <https://docs.lightning.engineering/the-lightning-network/taro>

**Q:** Suppose this bear market will last until the next bitcoin halving which will take place in May 2024 – does the Lightning team have enough funds? What plans do you have to survive in this environment? How do you remain optimistic during the downturns? (@capcosmos)

**A:** Together with Taro we also announced our Series B raise, which will bring us way beyond any current of future bear markets!

**Q:** Did you consider community feedback/requests during the creation of your product in order to expand on fresh ideas for your project? Many projects fail because the target audience and clients are not understood. So I'd like to know who your ideal consumer is for your product? (@LisaNazila)

**A:** Our ideal Taro user is somebody who doesn't want to understand the protocol or bitcoin. It's just somebody who wants to transact cheaply and globally without holding bitcoin themselves.

**Q:** Most of today's crypto projects have an impact on the environment, which is a serious problem. How about your project? (@nuhaloq90)

**A:** Taro is not a blockchain, it doesn't have mining, it only consumes the energy that the smartphones and servers consume that run it.

**Q:** Which consensus mechanism is applied in the Taro network? Also, at what speed will the Taro network process transactions? (PETERMILES)

**A:** Taro assets define their own rules, typically I expect transfers to use a simple signature scheme, like bitcoin. Each recipient needs to verify locally that the asset they receive exists and is properly owned and created according to the rules. This does not require you to run a full bitcoin node and can be done on a smartphone. For Taro transactions, they can be done on-chain and off-chain. On-chain transactions are conducted at the speed of a Bitcoin transaction (1 confirmation every 10 minutes), while off-chain transactions move at the speed of Lightning.

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multiple assets in a single transaction. The tree carries information about what kind of assets are transacted, and how to own these assets. There is a section in this guide that explains this in more detail:

<https://docs.lightning.engineering/the-lightning-network/taro>

**Q:** With blockchains being totally unalterable and modifiable, how will Lightning achieve being outside the chain, associate with it, and serve as a support to implement software services without affecting decentralization?

**A:** Every Taro channel or on-chain transfer will have to reference the bitcoin blockchain. That makes Taro transfers irreversible and makes it impossible to go back and alter transactions.

**Q:** What are the motivations behind this project? And how is TARO going to stay true to their plans?

**A:** There's been a lot of community feedback from people and businesses who see the Lightning Network as a superior payments network, but who see bitcoin's volatility as a significant burden. Taro combines both these worlds, you can transact over the Lightning Network, and you can choose whether you want to hold bitcoin, USD, or something else.

**Q:** What kind of user experience (UX) do you hope people will get from TaroProtocol?(@quyenhai3)

**A:** Getting paid should be as easy as downloading a wallet and showing a QR code, whether you're holding Bitcoin or USD. And anyone in the world should have the potential to pay anyone else!

**Q:** Compared to the end of 2017, the current Bitcoin bull run is mainly driven by institutional demand. What's your take on the future of Bitcoin? Do you believe Bitcoin can fulfill its vision as a decentralized P2P currency, or will it become a new "asset class" for financial investments only? (@SeaofHeyly)

**A:** Yes, at Lightning Labs we do believe in bitcoin as the money of the future, with the Lightning Network being the payment network of the future. We see the Lightning Network developing into a multi-currency network, and we as a team are a lot more interested in bringing billions of users to Lightning than bringing in billions of dollars.

**Q:** Focusing on Gamefi and NFTs development on the blockchain has become very trendy lately, so do you have any plans to collaborate with game developers and NFT platforms? And is Lightning's terminal system sufficient to meet the needs of game development and NFTs

With so many scalability solutions and different blockchains available, how does Lightning Labs plan to stay ahead of the competition?(@capcosmos)

**A:** We'll see, gaming is definitely a big market, and there are already successful gaming startups in the Lightning ecosystem. I personally believe stablecoins will be more attractive later on, but anyone can build on this and innovate, I'm excited for what others have in mind too!

**Q:** Hi, how can Lightning Network be improved? Will it be possible to make transactions more secure? How can Taro Protocol be improved?(@SantiPino)



improvements, like PTLCs or blinded paths.

**Q:** What is the biggest hurdle for the Lightning Network at this moment?(@juang)

**A:** Finding people that are willing to sell products over the Lightning Network, and others who want to buy things with it.

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